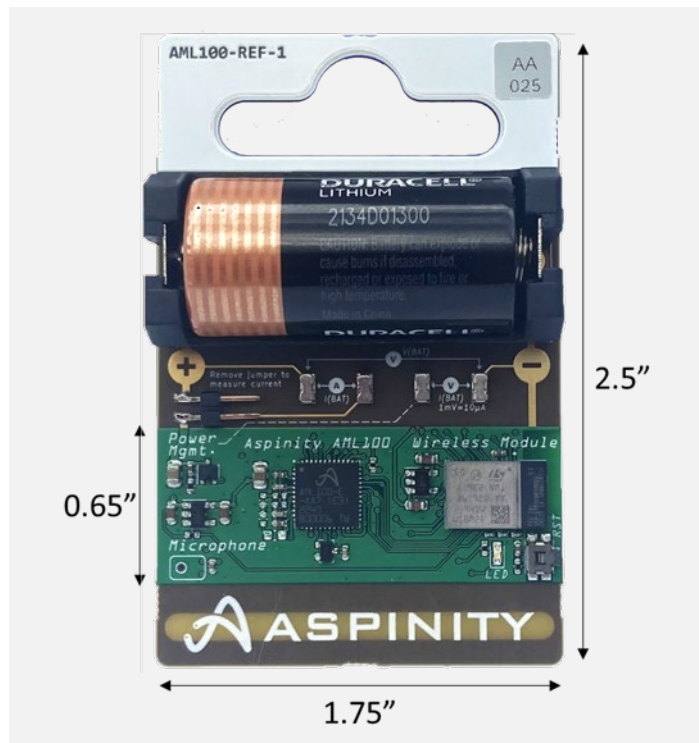


# AML100-REF-1 Module

## Product Brief



### AML100-REF-1 Features

- Complete reference module for straightforward prototyping and testing of battery-operated, always-on sensing solutions using the AML100 hardware and software
- System consumes <40µA in always-on mode for acoustic event detection applications using the onboard microphone
- Wireless collection of event detection, power consumption, and other performance data from module
- Up to 5- year battery life using one CR123A battery depending on application

### The AML100: Ultra-Low Power, High Performance Always-on Solutions

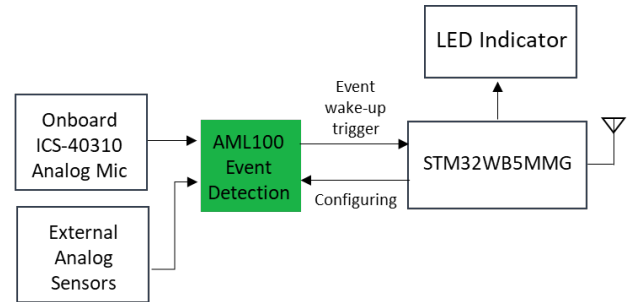
The AML100 is an analog machine learning (analogML™) processor that uses near-zero power to detect an acoustic or other sensor event from raw analog data so that the MCU and other higher power digital system components can remain off unless needed. By minimizing the always-on system power and the amount of time that the digital components are powered up, the AML100 processor enables an extended battery-life for wireless, always-on products while maintaining the accuracy of the solution.

### Description

The AML100-REF-1 is a fully integrated reference module for rapidly prototyping ultra-low power, battery-operated, always-on sensing solutions using the [AML100](#) and analogML™ algorithms. The AML100-REF-1 is 2.5" x 1.75", battery operated, and provides wireless performance data for easy deployment and test in real-life environments. The module includes a variety of components for testing including measurement circuits for power consumption/battery status, user buttons, and LEDs.

## AML100-REF-1 High Level Block Diagram

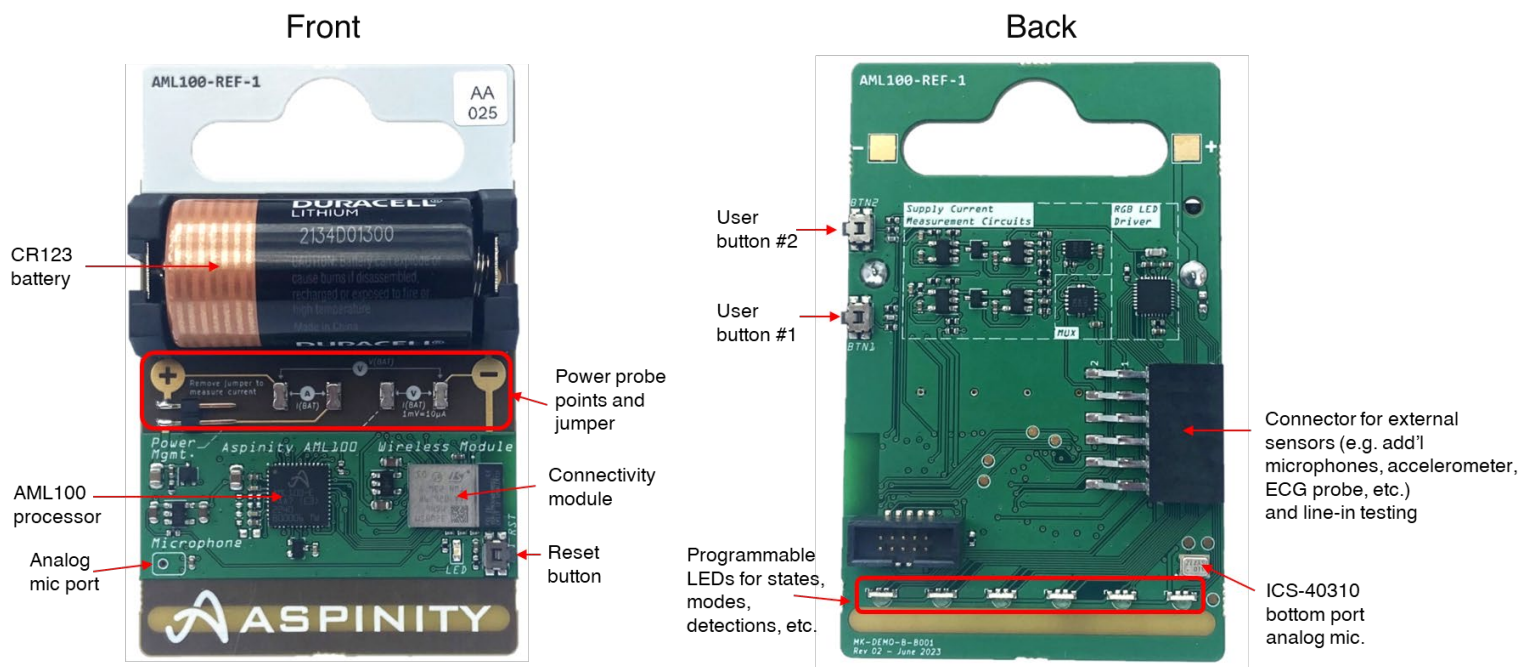
- AML100 analog machine learning processor
- ST Microelectronics STM32WB5MMG 64MHz Arm Cortex-M4 MCU and 2.4GHz wireless module
- TDK ICS-40310 analog MEMS microphone



## Module Capabilities

The AML100-REF-1 incorporates the three main hardware components needed for a wireless, ultra-low power always-on sensing solution: analog sensors, an AML100 analogML™ processor, and a wireless SoC. The AML100 consumes <20µA for analog event detection. Using the onboard microphone, the system consumes <40µA in always-listening mode. The module includes an onboard microphone and a connector for up to 4 external analog sensors that can be used for event detection applications ranging from acoustic event detection to vibration or biometric anomaly detection and others.

## AML100-REF-1 Front Side and Backside View



## Contact Us

If you have a product to prototype using the AML100-REF-1, please contact [info@aspinity.com](mailto:info@aspinity.com)